According to my observations, several days before the spawning the male spermatizes all the water in the aquarium and the zoosperms (spermatozoa) penetrate directly into the oviduct of the female, thus fecundating the eggs. The axolotl is capable of spawning five or six times a year, and produces each time from 150 to 200 young. A dim light is better for the maintaining of axolotls than a bright light, which they dislike.

I have some individuals in which the branchiæ are altogether absorbed; they have thus passed into the *Amblystoma* state and respire entirely by the lungs (*poumons*). I have never been able to secure reproduction under this last condition.

I feed my axolotls with earth-worms; they are fond of tadpoles also; in the absence of these things I frequently give them calf liver, presenting it to them in small morsels by the aid of a piece of wood.

The axolotl in its normal state is black; the albino is a variety which I have obtained among the spawnings of the former, and which became permanent and fertile like the black form.

DESCRIPTION OF A NEW SPECIES OF URANIDEA (URANIDEA POLLICARIS) FROM LAKE MICHIGAN.

By DAVID S. JORDAN and CHARLES H. GILBERT.

Uranidea pollicaris sp. nov. (29663.)

Body robust; nape prominent, the profile of head steeply declined, thence to tip of snout in a straight or slightly concave line; head much depressed, broad and flat above, evenly narrowed forwards to the broad, much depressed, bluntly-rounded snout; eyes small, with extensive vertical range, their diameter less than snout or than the flat interorbital width; mouth rather small, anterior, with but little lateral cleft; maxillary reaching vertical from front of orbit; teeth villiform on jaws and vomer, none on palatines; preopercular spine large and strong, spirally curved upwards and inwards, wholly invested with membrane; a single, sharp, concealed spinous point below angle of preopercle; isthmus broad, without fold, its width equaling distance from snout to middle of pupil.

Spinous dorsal rather low, nearly uniform in height, connected with second dorsal by a low membrane; longest spine equaling length of snout; soft dorsal long, and its longest ray $2\frac{1}{5}$ in head; origin of anal fin under third dorsal ray, its last ray under sixteenth of dorsal; highest anal ray $2\frac{1}{2}$ in head; ventrals I, 4, reaching two-thirds distance to vent; pectoral rays all simple, unbranched, the longest reaching vertical from vent, and contained $1\frac{1}{8}$ times in head. Vent equidistant between tip of snout and base of caudal fin.

Skin everywhere smooth.

Head $3\frac{2}{5}$ in length to base of caudal; depth $4\frac{3}{4}$; eye $5\frac{1}{3}$ in head.

D. VII—19; A. 13; V. I, 4; P. 17. Lat. l. complete.

Color olivaceous above, little punctulated; lower two-fifths of sides and whole under side of head and body uniform whitish; above, head and body with irregular spots and blotches of black; these in finer pattern on head, and not forming bands on back; dorsals, caudal, and pectorals with black spots arranged in more or less distinct series; anal, ventrals, and lower rays of pectorals translucent, unmarked.

A single specimen (No. 29663) 4½ inches in length, was taken in Lake Michigan, off Racine Wis., by Dr. P. R. Hoy, and presented to the National Museum.

OBSERVATIONS ON FOUR MULES IN MILK.*

By Professor ALFRED DUGÈS.

[Translation of a note contained in "El Repertorio" of Guanajuato, Mex., No. XVII, 1876.]

Although observations relative to the milk given by animals which have not passed through the state of gestation are few, still a number have been recorded, including some regarding the human species. Frèmy has given an analysis of the milk of a sheep and Schlossberger of that of a goat. Facts of this nature being so uncommon, I believe that the note which, conjointly with my learned friend Prof. Vicente Fernandez, I now publish, will prove of considerable interest.

On the 11th of May, 1876, having learned that there was a mule in milk at the Hacienda d'Argent de San Pedro de Rocha, on the Marfil road, a quarter league from Guanajuato, I went to the place, accompanied by my friend Fernandez. Through the kindness of the employés of Mr. Bernardo Lopez, proprietor of the farm, we were permitted to examine the phenomenal animal, which was then working in an ore mill.

The mule is of a chestnut color, with the nose, lower parts of the limbs, belly, tail, and mane white. Its height is about 1½ meters; its proportions are perfect, without fullness of the abdomen; the breast is also larger than those of hybrids of the same kind ordinarily; the back is quite concave. Except in these particulars, however, there is not the least doubt but that we had before our eyes an ordinary mule. We were told that it had been bought five years before, and, according to the workmen, it was at least seven years old. On examination, however, I discovered that the teeth resembled those of a horse four and a half or five years old. It is possible that there is an anomaly here co-ordinate with the peculiar appearance presented by the mammæ. The latter are shaped like the alligator pear (*Persea grattissima*), black, and without nipples. Their length is 12 centimeters, exclusive of the base, which is

*Translated by Frederick W. True, from Professor Dugès' French version of his original Spanish.